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IN THE UNITED STATES PATENT AND TRADEMARK OFFICEIn re Application of:
SERKH, Alexander

Serial No.: 10/664,443

Docket No.: T02-062A

For: BELT TENSIONER

Examiner: Johnson, Vicky A.

Group Art Unit: 3682

Declaration under 37 C.F.R. §1.132

I, Michael B. Schmid, residing at 1381 Kentfield, Rochester, Rhode Island, the sole inventor of the subject matter of U.S Patent No. 6,039,664, entitled "Tensioning Device for Traction Systems Such as Belts and Chains," hereby declare:

I am a Mechanical Engineer employed by the Gates Corporation as Vice President of Engineering for Power Transmission. I received my Masters degree from the University of Nuernberg in 1987. I have worked in the field of power transmission belts and belt tensioners for 18 years and I am an inventor in at least 10 U.S. patents and numerous counterpart foreign patents related to the tensioning of power transmission belts and the like. I have lead power transmission product development for the Gates Corporation for over a year. For at least the forgoing reasons, I respectively assert that I am an expert in at least the field of power transmission belt tensioners.

At the Gates Corporation, I am the supervisor of Alexander "Sasha" Serkh, the sole inventor of the subject matter of U.S Patent Application Serial No. 10/664,443, filed September 9, 2003, entitled "Belt Tensioner" and claiming priority to U.S. Provisional Application Serial No. 60/412,471, filed September 20, 2002.

I have reviewed my U.S. Patent Number 6,039,664 (hereinafter referred to as "my patent"), as well as reviewing claims 1-11 of U.S. Patent Application Serial Number 10/664,443. I have also reviewed a copy of the USPTO Office Action mailed on June 6,

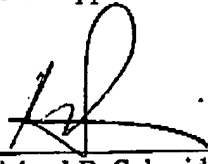
2005, finally rejecting claims 1-3 and 5-11 of U.S. Patent Application Serial Number 10/664,443 as anticipated by my patent. In referring to my patent, the Office Action alleges: "It is inherent that the forces of the strut would balance out the forces of the pulley, because as the belt applies more force against the pulley the strut would apply an equal opposite force in order to keep tension on the belt. The forces of the pulley and the strut have to pass through the pivot bearing and balance in order to keep the appropriate tension on the belt." Further, the Office Action states: "It is inherent that the torque loss would be balanced as in the claimed invention since the two inventions are almost identical in structure." Upon this review I have determined the following:

- 1) As pointed out by the Office Action, my patent does in fact disclose a power transmission belt tensioner.
- 2) I believe one of ordinary skill in the art would read my patent as disclosing a power transmission belt tensioner of the type having a pulley adapted to communicate with a surface of a power transmission belt, an arm supporting the pulley upon which the pulley is rotatably mounted via a pulley bearing, a shaft supporting the arm, the shaft rotatably supported by a pivot bearing, an attachment point for a strut, and the strut attached to the attachment point, wherein the pulley and the attachment point laterally offset in relation to the pivot bearing.
- 3) However, my patent was not intended to teach or suggest, nor I do not believe one of ordinary skill in the art would find that, the tensioner arrangement of my patent would necessarily possess the characteristic of being substantially balanced in terms of parasitic torque across its pivot bearing(s). More specifically, my patent does not teach or suggest balancing a pulley, attachment point and pivot bearing in terms of parasitic torque across the pivot bearing by arranging the a pulley, attachment point and pivot bearing such that a balance line that might be inferred as passing through the through an axis of the strut attachment point and a center of the tensioner pulley would intersect the pivot

shaft. Such an implementation of the invention of claim 1 is taught as a means to balance the a pulley, strut attachment point and pivot bearing in terms of parasitic torque by the specification of patent application serial number 10/664,443.

Review of Figure 1 of my patent makes clear that a balance line cannot pass through the axis of the strut attachment point, a center of the tensioner pulley and the pivot shaft of my patent, as the a plane containing the pulley axis and the pivot axis is perpendicular to a plane containing the pivot axis and the attachment point. As pointed out in the specification of patent application serial number 10/664,443 the attachment point for the strut of my patent remains substantially in the plane at the center of rotation of the pivot bearing. It is readily apparent that, when the tensioner of my patent is placed into operation, the forces acting upon the tensioner by the belt and the strut give rise to an unbalanced load across the pivot bearing causing parasitic torque, which tends to force the pivot shaft to axially misalign with the bearing. This would be true whether the strut is providing the biasing force for the tensioner or only modifying the biasing force through damping. Thus, my patent does not teach or suggest, nor does my patent necessarily possess the characteristic of balancing a pulley, strut attachment point and pivot bearing in terms of parasitic torque across the pivot bearing.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Michael B. Schmid

Date: 5/1/2006